DOCUMENT RESUME

ED 252 696 CE 040 489

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TITLE Excellence in Industrial Arts--A Fundamental Perspective for All of Education.
PUB DATE 84
NOTE 14p.; Paper presented at the American Vocational Association Convention (New Orleans, LA, November 30-December 4, 1984).
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Educational Needs; *Educational Philosophy; Human Dignity; *Individual Development; Individual Needs; *Industrial Arts; Policy Formation; Postsecondary Education; *Program Improvement; Public Policy; Secondary Education; *Self Actualization; Trade and Industrial Education
IDENTIFIERS *Excellence in Education; *United States

ABSTRACT

The topic of excellence in industrial arts provokes the question: "Excellence in relation to what?" What is the central mission around which one might attempt to describe or even achieve the position of "excellence"? The importance of establishing a clear understanding of excellence in education is dependent upon the definition of excellence and the establishment of benchmarks or goals for education that befit U.S. democracy. The goals of education in the United States are embodied in a profound commitment to the fullest development of each person. The issue, therefore, is not "excellence in industrial arts." It is excellence in all education, excellence in developing the talents and abilities of each person to the fullest. However, "excellence" cannot exist without equity. They are inseparable in a democracy, mandating that the offerings of education reach out to the poorest student as well as to the most capable, to the handicapped as well as to the physically fit, to minority groups as well as to those in the mainstream. The industrial arts establishment could profit from recent research on excellence in business. A program drawn from this research would include these elements, among others: (1) establishing broad goals in keeping with basic tenets underlying democracy, (2) promoting a sense of concern for every learner, (3) developing teacher qualities and behaviors, and (4) developing programs that are aimed at the achievement of excellence in relation to maximum development of the individual. The strength of this nation demands such excellence. (KC)

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EXCELLENCE IN INDUSTRIAL ARTS --
A FUNDAMENTAL PERSPECTIVE FOR ALL OF EDUCATION

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Excellence in Education in these United States is a goal based on the concepts of individual fulfillment and to achieve the promise in each. Equity and excellence in this democracy are inseparable.

D.M.

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The topic of "Excellence in Industrial Arts" provokes the question -- "excellence in relation to what?" What is the central mission around which one might attempt to describe or even achieve the position of "excellence"? Can we demonstrate excellence in Industrial Arts through bigger and better projects? -- through crowded laboratories and overflowing display cases? -- through the acquisition of the latest programmed robots and a good supply of computers, -- or through carefully selecting the kind of students who can enter the program?

These items might raise the question of bigger and better projects for what? -- overflowing display cases for what? -- programmed robots and ingenious computers for what? -- or student selection for what?

Concept of Excellence

As we pursue the topic, "Industrial Arts and Excellence," it is imperative that we establish some ground rules regarding "excellence in education". The issue of "excellence in education" must first be understood before much clarification can be made in the topical area of "Industrial Arts and Excellence". Essentially, this is a recognition that Industrial Arts is an integral part of education and thus it (Industrial Arts) will achieve its excellence within a

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framework centering around the goals of education in these United States. I will move into the central issue of excellence in education by pointing out the fallacy of the many comparisons that are made between our education and Russia's.

The comparison of American education with that of Russia is a phony process aimed at supporting weak and untested analogies or comparisons which fail to examine the total organismic nature of each of these societies. One again would have to raise the question of "Education for what?" in Russia as compared to "Education for what?" in the United States. The fundamental ideologies and principles that establish and promote the role of individuals in our American democracy are vastly different than those principles and ideologies that Russia has established and promoted with respect to the roles of all individuals in that closed society.

The importance of establishing a clear understanding of excellence in education is thus dependent upon the definition of excellence and the establishment of benchmarks or goals for education that are indeed befitting the democracy of this great nation. For, it is in keeping with the precepts of the American culture, and the American Democracy, that the goals of education must stand the test of excellence, relevance, and validity.

The goals of education in these United States are embodied in a profound commitment to the fullest development of each and every individual.

The answer to the question of "excellence for what?" is that illusive entity to which Industrial Arts and all of education must seek the answer, for therein lies the basis for education in this great country. The issue is not "excellence in Industrial Arts." It is excellence as a challenge, as well as a benchmark, for all of education, based on a goal that is a part of the founding documents that gave birth as well as direction to these United States of America.

John Gardner (1961), in his book, Excellence: Can We Be Equal and Excellent Too?, makes the following statement that clearly establishes the ideal or goal

for excellence in education.

> In our own society one does not need to search far for an ideal of great vitality and power which can and should serve the cause of excellence. It is our well-established ideal of individual fulfillment. This ideal is implicit in our convictions concerning the worth of the individual. It undergirds our belief in equality of opportunity. It is expressed in our conviction that every individual should be enabled to achieve the best that is in him (her). (p. 135)

I would propose that we in Industrial Arts, as well as all public education, define excellence in terms of the degree to which such education (1) provides for the maximum development of each individual, and (2) the degree to which it provides for each to achieve the promise that is in him or her. This is a goal that gets to the heart of "excellence in education" in these United States. And, it is my firm conviction that Industrial Arts has a major role to play in that achievement of excellence. The maximum development of people is central to the process of education and the product is clearly people fulfillment.

This goal is indeed the answer to the question of "Excellence in Industrial Arts for what?" The source of this goal has legitimacy in the history of this great nation as well as in those lofty ideals and principles upon which it was founded.

The publication, Goals for Americans (1961), contains in its introduction the following statement. (p. 1) "The paramount goal of the United States was set forth long ago. It is to guard the rights of the individual, to ensure his (her) development, and to enlarge his (her) opportunity."

As contemporary as these ideals may seem, they are set forth in the Declaration of Independence as adopted by the Continental Congress on July 4, 1776.

John W. Gardner (1961), in his discussion of "National Goals in Education," has stated:

> ... Our deepest convictions impel us to foster individual

> fulfillment. We wish each one to achieve the promise that is in him. We wish each one to be worthy of a free society, and capable of strengthening a free society. (p. 81)

It is the concept of education that places individual fulfillment and the great goal of helping each to achieve the promise that is in each, against which we here in America must set our measuring tools in an attempt to assess our achievements toward excellence in education. Ours is not a system predicated on the concept of education for the few, the privileged, the elite, or just the college bound. The demands of a democracy reach out for support and substance to each and every citizen. There can be no lesser requirement if democracy is to survive.

The importance of individual fulfillment was stressed by Ernest Boyer (1983) in his book, The High School, in which he stated:

> There should never be a child -- let alone a generation of children, who passes through our schools unawakened and unprepared for what will come. Educating a new generation of Americans to their full potential is still our most compelling obligation. (p. 297)

The uniqueness of this basis for excellence in American public education is elaborated on by John Gardner (1968) in his book, No Easy Victories.

> The history of American education is the long, turbulent record of a nation that wasn't afraid to risk failure or trouble or confusion in pursuit of a goal that at first seemed widely impractical: to give every American child a chance to develop to the limit of his ability. It is still one of the most radical ideas in human history, yet it grew out of the American soil as naturally as wheat or corn. (p. 67)

Thus, I would propose to the Industrial Arts profession that its first preoccupation and concern must be directed toward a more complete realization of what it means to concertedly strive for excellence through valued contribution to each and every individual -- with respect to their fulfillment and their achievement of the promise within each of them.

Once having arrived at that point, we would soon come to the realization that "Excellence in Industrial Arts" must be characterized by a diversity

of offerings at all levels as well as within the classes themselves. This brings us to an important concept that focuses on the ideas of "excellence" and "equity".

Excellence and Equity

The American dream for education in this country extends to all segments of society -- the rich, the poor, the less capable, the capable, and the highly capable. The goals of American education know no boundaries by race, sex or geography. Excellence in education is integrally tied with the concept of equity as a national mandate.

Boyer (1983) commenced on this relationship in his report on secondary education in America as follows:

> ... to push for excellence in ways that ignore the needs of less privileged students is to undermine the future of this nation. Clearly, equity and excellence can not be divided. (p. 6)

Excellence in the American school system grows out of a concept of equality of opportunity. This idea of equality of opportunity extends to all levels of society as well as all levels of ability, for, without that equality of opportunity, there can be no equity -- and, likewise, there can be no chance of individual fulfillment, nor to achieve the promise that is in each.

Harold Benjamin (1949), in that great Harvard Inglis Lecture titled, "The Cultivation of Ideosyncracy," discussed the concern for equality of opportunity in the following statement.

> To give equality of opportunity, the ... educator starts with a maximum of understanding for every child. That means that every child will be studied as precisely and extensively as present techniques allow. The crippled six-year-old ... girl of modest intellectual ability will get just as much understanding as research and practice can provide. The physically perfect six-year-old ... boy of highest intellectual capacity will also get just as much understanding as research and practice can provide. (p. 33)

The issue of excellence and equity is no longer debatable. They are inseparable in a democracy and one can not exist without the other under the

precepts of our present form of government.

Excellence and equity draw their strength and vitality on a concept of the dignity and self worth, as well as value, of all individuals who achieve their divine right from the Lord above, and not from a national ruling body, an educational commission, or a local board of education. It is a concept of individual worth and value that transcends much of the elitism and promotion of power for selected groups. It is a vision that is peripheral in nature and not channelled to a limited spectrum of the whole.

Some Interesting Relationships with Excellence in Business

The pursuit of excellence is not a concern for just Education or specifically Industrial Arts. It is one that has been a matter of considerable study in the field of business and organizational management. It appeared that perhaps we in Industrial Arts might profit from some of the research that has been done in this area.

There is an important book that came out a few years ago from which we may want to take a few clues in our search for excellence. It is called In Search of Excellence, by Peters and Waterman (1982). Their search for excellence dealt with the issues of what makes successful business management and why do some companies excel while others "wallow in mediocrity". The findings by Peters and Waterman are, in general, not new to the literature in Industrial Arts/Technology Education. However, their practice, on the other hand, by the profession, is not extensive.

Peters and Waterman provide us with some insights regarding what contributed to excellence among our industry leaders. There is an obvious relationship between the findings by these two writers and the task of achieving excellence in Industrial Arts/Technology Education. The following is a statement from the book by Peters and Waterman (1982) that contains four important points that may be directly related to the topic, "Excellence in Industrial Arts".

> ... the people who lead the excellent companies are a bit simplistic. They are seemingly unjustified in what they believe the worker is capable of doing. They are seemingly unjustified in believing that every product can be of the highest quality. They are seemingly unjustified in believing that virtually every worker can contribute suggestions regularly. It is simplistic. But it may be the true key to inducing astonishing contributions from tens of thousands of people. pp. 324,325)

Yes, we too, may be simplistic in our perceptions of what produces excellence in our educational programs, and particularly the Industrial Arts/Technology Education program. We may be seemingly unjustified in what we believe a student is capable of doing — and yet, the record supports the reality of performance equal to or above expectation when we put the ingredients of belief together.

We may be seemingly unjustified in believing that every child's education can be of the highest quality — and yet the record of performance in model programs with great teachers leads us to maintain that belief and perception.

We may be seemingly unjustified to believe that the service, attention, and treatment given every child should be in keeping with the best in theory and practice that the profession has to offer.

And oh, yes, it may be seemingly unjustified to believe that the students can make significant contributions by way of suggestions for the functioning of our programs.

These seemingly simplistic, yet powerful beliefs, are built upon some important ideas that can contribute to what we do in the pursuit of excellence in Industrial Arts/Technology Education. They include such ideas as —

1. faith in the capability of students,
2. every student can achieve at higher levels,
3. every student deserves the best the profession can offer,
4. students can make significant contributions.

Thus, the concept of excellence that we may want to utilize in education is built upon the vision, the belief, and the will to accomplish that concept by —

> The findings from the excellent companies are an upbeat message. ... the good news comes from treating people decently and asking them to shine, and from producing things that work. Scale efficiences give way to small units with turned-on people. (p. xxv)

The inference that one can draw for Industrial Arts from the above description of excellent companies are as follows:

1. The people (students) are treated decently and they are encouraged to perform at a high level.
2. The methodologies, programs, and strategies work. They have withstood the tests of validity as well as reliability. They are consistent with the goals, practices, and theories of learning as well as the stated expectancies.
3. Large class numbers' games give way to smaller quality centered units, which imply the use of large group instruction, small group instruction and individual instruction as the student-sensitive teacher sees the need.
4. The individual students are turned on by upbeat, enthusiastic teachers. Closely associated with this latter idea is another simplistic, yet powerful, dictum that centers around the perceptions of people -- commonly called the pygmalion effect. This pertains to the perceptions of teachers as well as students. In programs of excellence there is a two-edged sword that often provides for achievement. First, there is the belief <u>by the teacher</u> that the student is fully capable of going beyond what he/she usually performs. Simply stated, this is faith in the intelligence of kids. Secondly, that <u>the student him/herself</u> has the confidence and belief in their self perception that achievement at a high level is fully a potential that lies within them. We must work with all our insights and understandings to develop a positive belief in the great potential that lies within our students. Furthermore, we must communicate that same belief to the students so that they

may believe in themselves, in their self worth, and in their ability to reach above and beyond their normal performance in all areas of useful pursuit.

Suggestions for Excellence in Industrial Arts

This final section is a form of summary as well as a series of guidelines that may prove useful in achieving "Excellence in Industrial Arts". The following represents a form of structural model that invovles a number of important elements vital to excellence in education, and specifically Industrial Arts. These elements would, among others, include the following:

1. Establishing broad goals in keeping with basic tenets underlying the democratic society in which we function.
2. Promoting a sense of concern for each and every learner.
3. Developing teacher qualities and behaviors.
4. Developing guidelines for programs that are aimed at the achievement of excellence in relation to maximum development of the individual, and individual fulfillment.

A further delineation of these four concerns or elements in the pursuit of excellence in Industrial Arts would include the following:

1. Broad goals -- Excellence in Industrial Arts for what?
   - o Programs and practices aimed at
     - (1) the maximum fulfillment of the individual
     - (2) assisting every individual in the achievement of the promise in each.
   - o Concern for the needs of society and persons living in that society.
2. Concern for the learner -- Excellence in Industrial Arts for whom?
   - o Extending our perceptions about what each individual is capable of doing.
   - o Promoting and practicing the idea that every individual child is deserving the best and finest that research, theory, and practice

have to offer.

- o Establishing standards that cause each individual to reach and to extend themselves towards their potential.
- o Permitting students to become involved in the process of suggesting ways to build and improve the program.
- o Recognizing and utilizing the differences that exist among students.
- o Asking kids to shine.

3. Developing teacher qualities and behaviors consistent with their needs in accomplishing the goals of education -- Excellence in Industrial Arts through whom?
   - o Treating students decently
   - o Promoting excellence in all that is done
   - o Having faith in the intelligence of kids
   - o Encouraging the development of a positive image on the part of each student
   - o Developing a positive self concept on the part of the teacher
   - o Maintaining an optimistic attitude toward the potential for education in this nation
   - o Keeping up to date on issues and trends in and out of one's field of concentration
   - o Developing the qualities of a facilitator of learning rather than a dispenser of facts
   - o Involving one's self in the club or association work of students
   - o Interacting with teachers in other disciplines
   - o Developing a helping attitude with respect to the students and other groups to be served
   - o Developing an inquiring attitude toward the problems, issues, processes and tasks associated with teaching.

- o Developing a caring attitude toward each and every student

4. Adopting guidelines for programs aimed at the achievement of excellence toward maximum development of the individual and individual self fulfillment.

   - o Programs are multiple levels in nature.
   - o Programs vary within levels.
   - o Programs are based on sound concepts of human growth and development.
   - o Programs are contemporary and futuristic in their outlook.
   - o Programs are based on the finest and most appropriate theories of learning.
   - o Programs have strong linkage with the community.
   - o Programs bring the community into the school and take the school out into the community.
   - o Programs provide for an effective and relevant integration of mathematics, science, social studies, art, and technology.
   - o Programs promote a holistic form of education.
   - o Programs make effective use of instructional technology.
   - o Programs provide for rich and relevant experiential involvement with the content and substance of technology.
   - o Programs provide for student involvement in --
     - .. problem solving
     - .. inquiry
     - .. independent study
     - .. creating
     - .. communicating
     - .. decisionmaking
     - .. learning to learn
     - .. leadership and followership
     - .. researching
     - .. testing
     - .. analyzing
     - .. designing
     - .. constructing
     - .. evaluating
     - .. challenging

- Programs maximize the use of the laboratory setting as an experiential center for a living-learning experience with the content and potential in Industrial Arts.
- Programs are flexible and geared to change with respect to the learners as well as the content.
- Programs challenge the learners.
- Programs are geared to the needs of citizens in a rapidly changing society.
- Programs have public acceptance.

Postscript

No attempt has been made to describe a specific program. The effort in this presentation was to establish a conceptual framework within which many and varied programs could be developed to meet the needs of the students and society.

There can be no real achievement of excellence in Industrial Arts that does not make a concerted effort and impact on the goals of individual fulfillment or the achievement of the promise in each individual. We must not fall victim to an educational scheme that promotes elitism at the cost of hundreds of thousands who may not be able to achieve such a level in a prescribed series of disciplines. Excellence demands equity in this nation by virtue of its founding documents. Furthermore, the strength of this nation depends on the extent that equity is exploited in the fulfillment of the individual and the achievement of the promise in each.

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